

REMARKS

Claims 16 and 20-42 are canceled. Claims 1, 10, 12 and 17 have been amended. Claims 1-15 and 17-19 remain in this application. No new matter is being added. Support for the amendment to the claims can be found in the specification and drawings, for example, in at least paragraph [0020] and in FIG. 3. Reconsideration of this application is respectfully requested.

Allowable Subject Matter

Claims 10 and 12 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant notes the allowability of claims 10 and 12 with appreciation.

Claim 10 has been rewritten in independent form to include the limitations of claim 1 from which it originally depended. Claim 12 has been rewritten in independent form to include the limitations of claim 1 from which it originally depended. Accordingly, claims 10 and 12 are in *prima facie* condition for allowance.

Claim Rejections - 35 U.S.C. § 102

Claims 1-9, 11 and 13-19 stand rejected under 35 U.S.C. 102(b) as being anticipated by Shimamoto et al. ('451). With respect to claim 16, the same has been canceled herein, thus rendering the rejection thereof moot. With respect to claim 1, applicant respectfully traverses this rejection for at least the reasons stated herein below.

The PTO provides in MPEP § 2131 that

"[t]o anticipate a claim, the reference must teach every element of the claim...."

Therefore, with respect to claim 1, to sustain this rejection the *Shimamoto* reference must contain all of the above claimed elements of the respective claim. However, contrary to the examiner's position that all elements are disclosed in the *Shimamoto* reference, the latter reference does not disclose "introducing a diffusion barrier material into the first dielectric layer *after the first dielectric layer alone is formed* ... creating a gradual gradient diffusion barrier concentration profile ... in which a concentration of the diffusion barrier material proximate a first surface of the first dielectric layer is *an order of magnitude higher* than a concentration of the diffusion

barrier material proximate a second surface opposite the first surface, the second surface being located at an interface between the first dielectric layer and the semiconductor material" as recited in Claim 1. In contrast, for example, *Shimamoto* discloses "a high dielectric insulation film/ SiO₂/Si substrate" ... "further applied with an NO treatment thereby introducing N near the SiO₂/Si boundary." (See *Shimamoto* at col. 15, lines 49-53). Accordingly, *Shimamoto* does not teach introducing a diffusion barrier material into the first dielectric layer *after the first dielectric layer alone is formed* ... creating a gradual gradient diffusion barrier concentration profile ... in which a concentration of the diffusion barrier material proximate a first surface of the first dielectric layer is an order of magnitude higher than a concentration of the diffusion barrier material proximate a second surface ... at an interface between the first dielectric layer and the semiconductor material" as claimed in Claim 1. Claim 1 is believed in prima facie condition for allowance. Withdrawal of the rejection of claim 1 is respectfully requested.

Dependent claims 2-9, 11, 13-15 and 17-19 depend from and further limit allowable independent claim 1 and therefore are allowable as well. Withdrawal of the rejection of claims 2-9, 11, 13-15 and 17-19 is respectfully requested.

Conclusion

It is clear from all of the foregoing that claims 1, 10 and 12 are in condition for allowance. Dependent claims 2-9, 11 and 13-19 depend from and further limit independent claim 1 and therefore are allowable as well.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

In addition, the Office Action contains a number of statements characterizing the claims, the Specification, and the prior art. Regardless of whether such statements are addressed by Applicant, Applicant refuses to subscribe to any of these statements, unless expressly indicated by Applicant.

The matters identified in the Office Action of January 24, 2006 are now believed resolved. Accordingly, the application is believed to be in proper condition for allowance and an early notice of allowance is respectfully requested. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, it is requested that the Examiner telephone the undersigned at the number indicated below.

If Applicant has overlooked any additional fees, or if any overpayment has been made, the Commissioner is hereby authorized to credit or debit Deposit Account 503079, Freescale Semiconductor, Inc.

An early formal notice of allowance of claims 1-15 and 17-19 is requested.

Respectfully submitted,

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